CLAIMS

What is claimed is:

1. A process for fabricating a micro-optical electromechanical system device, the process comprising:

depositing an optical coating that is supported by a device layer;

removing a sacrificial layer to form a release structure in the device layer along an optical axis; and

forming a device layer port by removing a portion of the device layer in a region around the optical axis.

2. A process as claimed in claim 1, wherein the step of depositing the optical coating comprises depositing a high reflectivity coating.

3. A process as claimed in claim 1, wherein the step of depositing the optical coating comprises depositing a dielectric thin film coating.

4. A process as claimed in claim 1, wherein the step of depositing the optical coating comprises depositing a dielectric thin film coating having greater than six layers.

5. A process as claimed in claim 1, further comprising installing a mirror structure opposite the optical coating.

6. A process as claimed in claim 1, wherein the step of removing the sacrificial layer comprises etching the sacrificial layer from a region between the device layer and a support.

7. A process as claimed in claim 6, further comprising forming a support optical port through the support along the optical axis.

8. A process as claimed in claim 1, further comprising depositing a sacrificial layer on the device layer and then depositing the optical coating on the etch-stop layer;

9. A process as claimed in claim 8, wherein the step of forming the device layer port comprises etching through the device layer to the etch-stop layer.

10. A process as claimed in claim 9, further comprising removing the etch-stop layer from the region of the device layer port.

11. A process as claimed in claim 1, further comprising forming the device layer port in the device layer and then depositing the optical coating into the device layer port.

12. A MOEMS device, comprising:

at least first mirror structure and a second mirror structure defining an optical cavity;

a support; and

a deflectable structure on the support that holds the first mirror structure, the deflectable structure being located on an external side of the first mirror structure relative to the optical cavity, the deflectable structure having an optical port in a region around an optical axis of the optical cavity.

13. A device as claimed in claim 12, wherein the first mirror structure and the second mirror structure each comprise a dielectric thin film coating.

14. A device as claimed in claim 12, wherein the first mirror structure is suspended on the deflectable structure across the optical port in the deflectable structure.

15. A device as claimed in claim 12, wherein the support comprises silicon wafer material.

16. A device as claimed in claim 12, further comprising an insulating layer between the support and the deflectable structure.

17. A device as claimed in claim 16, wherein insulating layer functions as an electrostatic drive cavity spacer.

18. A device as claimed in claim 12, wherein the optical port is sized in response to a mode field diameter of light resonating in the optical cavity.